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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/080,715 | 02/25/2002 | Yutaka Yoshimura | 520.41252X00 | 8317 |

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|---|---|---|---|
| 20457 7590 06/13/2005 | | EXAMINER | |
| ANTONELLI, TERRY, STOUT & KRAUS, LLP | | AST, FATIMA M | |
| 1300 NORTH SEVENTEENTH STREET | | | |
| SUITE 1800 | | ART UNIT | PAPER NUMBER |
| ARLINGTON, VA 22209-3873 | | 2143 | |

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/080,715 | YOSHIMURA ET AL. |
| | Examiner | Art Unit | |
| | Fatima Ast | 2143 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>25 February 2002</u>.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>25 February 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All    b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>25 Feb 2002</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

## DETAILED ACTION

Claims 1-20 are pending.

### *Claim Rejections - 35 USC § 112*

1.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.      Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.  The phrase "configured for division and allocation of each

computer resource so as to form a plurality of logic partitions operated by independent

OSs" is ambiguous in that it can be interpreted to mean that an individual resource is

partitioned or alternatively interpreted to mean that the collection of resources within the

local network are partitioned creating logical partitions similar to logical domains on a

network.  It appears that the intended meaning is for the collection of resources to be

partitioned or divided into smaller groups or partitions and this is the meaning Examiner

will assume for purposes of prior art examination.

### *Claim Rejections - 35 USC § 102*

1.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

2.      Claims 1 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by

Aziz (US 6,779,016 B1).

1.      Regarding claim 1, Aziz discloses a computer resource allocating method for

allocating servers to each user in a computer system having a plurality of servers

interconnected by a local network, connected externally to the Internet, connected to a

storage and a storage network, and processing a request of a plurality of users,

comprising:

2.      configuring, for each user, a VLAN related to connection to servers allocated to

the user and connection between the servers (column 9 line 50 – column 10 line 5,

where Aziz teaches allocation of servers to a user and the configuration of VLAN

switches to create a VLAN corresponding to the previously allocated resources);

3.      monitoring a load of each of the servers (column 4 line 64 – column 5 line 8,

where Aziz teaches a supervisory mechanism identified as a Control Plane, where said

Control Plane monitors the loads of the computer resources); and

4.      when making an allocation change of said servers of said user according to the

monitoring result of said load, making a dynamic change of the VLAN of the user who

changes allocation so that a computer allocated to each user is always included into the

VLAN of the user (column 10 lines 16-37, where Aziz teaches addition of a server and

the updating of the VLAN as a result of this addition).

5.      Regarding claim 16, Aziz discloses a charging method for charging to each user

in a system having a plurality of servers interconnected by a local network, connected

externally to the Internet, connected to a storage and a storage network, and processing

a request of a plurality of users, comprising:

6.      configuring, for each user, a VLAN related to connection to servers allocated to

the user and connection between the servers (column 9 line 50 – column 10 line 5); and

7.      changing server allocation of each user at any time according to comparison of a

service level previously configured for each user with the operating state of the servers

allocated to the user (column 16 lines 1-11, where Aziz teaches dynamic adjustment of

the allocation of resources dependent on real-time loads compared to user selected

service plans) and charging according to the allocating record of the servers (column 16

lines 24-46).

### Claim Rejections - 35 USC § 103

8.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.      Claims 2, 7, 14-15, and 17-20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Aziz.

10.     Regarding claims 2 and 14, Aziz discloses a computer resource allocating

method used in a computer system having a plurality of computers interconnected by a

local network, connected externally to the Internet, and connected to a storage and a

storage network in which at least one of said plurality of computers is configured for

division and allocation of each computer resource so as to form a plurality of logic

partitions comprising:

11.     independently configuring a VPN for each user on said Internet to allocate a

network bandwidth to each user (per pending claims 2, 14) (column 4 lines 29-41,

where a VPN is configured to connect a user's Intranet to the resources which have

been allocated to them, such resources being identified as a VSF by Aziz);

12.     independently making an allocation of a logic partition to each user in the

computer forming said plurality of logic partitions (per pending claim 14) (column 9 lines

41-60, column 10 lines 8-15);

13.     configuring a VLAN for each user with respect to connection to a logic partition

allocated to each user and connection of the logic partitions allocated to each user (per

pending claim 14) (column 9 line 50 – column 10 line 5).

14.     Aziz does not specifically enumerate that the plurality of logic partitions are

operated by independent OSs (per pending claim 14), however, Aziz does teach the

computer resources can run different operating systems (column 8 lines 37-40), and

specifically teaches that when a resource is transitioned from one logic partition to

another it is rebooted with one of a plurality of available operating systems (column 7

lines 52-60), thus it would have been obvious to one of ordinary skill in the art at the

time of applicant's invention for the plurality of logic partitions to be operated by

independent OSs.

15.     Aziz does not specifically enumerate making a selection, in each VLAN, of a

packet transmitting the VLAN by VLAN tagging (per pending claims 2, 14), however, in

light of Aziz's teaching of a VLAN, it would have been obvious for the packets traversing

the VLAN to be modified with VLAN tagging, as VLAN tags are known in the art (see

reference not relied upon IEEE Std 802.1Q-1998).

16.     Regarding claim 7, Aziz discloses the computer resource allocating method

according to claim 1, wherein when making a server allocation change to a user in the

case of increasing a load of the server with respect to the resource divided to the user,

a server allocating process to the user is performed, and thereafter, a VLAN part

changing process is performed (column 10 lines 25-37).  Aziz does not specifically

enumerate performing the change process in stepwise order of the switch on the

storage side and the switch of the entry of the servers, however, it would have been

obvious for the change process to be performed in any order because the order in

which the switches are changed is irrelevant for the successful reconfiguration of the

VLAN.

17.     Regarding claim 15, Aziz discloses the computer resource allocating method

according to claim 14, wherein said storage network configures zoning for each user

corresponding to the logic partition of the computer so as to hold security of the user

from the computer to the storage resource (column 6 lines 44-59).

18.     Regarding claims 17 and 18, Aziz does not specifically enumerate changing the

user's storage network bandwidth allocation, storage access priority or network

bandwidth allocation based on comparison of service level agreement to the operating

state of the allocated resources, however, Aziz does teach service level plans providing

control values for a multitude of parameters of the allocated resources (column 16 lines

1-12) and further teaches dynamic changes to the allocated resources based on monitoring of those resources (column 8 lines 48-65). It would have been obvious for the changes to storage network bandwidth, access priority etc. to occur as a result of comparisons of an operating state with values set within a service level agreement as Aziz does teach monitoring of the state of the allocated resources (column 13 lines 16-36).

19.     Aziz discloses a charge is calculated based on the operating record of the storage network or the network (column 16 lines 24-47).

20.     Regarding claims 19 and 20, Aziz does not specifically enumerate charging additional fees for optional security agreements or optional guaranteed bandwidth agreements, however, Aziz does teach charging the user based on usage (column 16 lines 24-47) and further teaches the user's ability to customize the allocation of resources as they desire (column 15 line 32 – column 16 line 22), specifically Aziz teaches allowing the user to change parameters of their virtual server farm and linking any customization done by the user to a billing system, such that the user will be appropriately charge for any customizations. It would have been obvious for such customizations to include security settings and bandwidth settings, as such parameters are well known in the configuration of networks.

21.     Claims 3-6 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aziz as applied to claim 1 above, and further in view of Erwin (Erwin, Mike et al; Virtual Private Networks).

22.    Regarding claim 3, Aziz discloses the computer resource allocating method

according to claim 1, further comprising:

23.    configuring a VPN connecting the exit of a user and the entry of said computer

system via a carrier on said Internet to each user (column 4 lines 29-41, where a VPN is

configured to connect a user's Intranet to the resources which have been allocated to

them, such resources being identified as a VSF by Aziz);

24.    monitoring at least a network load and making a change of the configuration so

as to change a network bandwidth according to the monitoring result of said load

(column 8 lines 48-65).

25.    Aziz does not specifically enumerate monitoring of the VPN configured for each

user nor change of the VPN configuration so as to change a network bandwidth.  Erwin

discloses monitoring and changing the VPN in order to meet bandwidth requirements

(section 10.3).  It would have been obvious to combine the monitoring and changing of

Erwin with the VPN of Aziz in order to gain the advantage of meeting quality of service

requirements as taught by Erwin.

26.    Regarding claim 4, Aziz-Erwin discloses the computer resource allocating

method according to claim 3, further comprising:

27.    configuring zoning for each user by said storage network (column 6 lines 44-59);

28.    making an allocation of a storage access bandwidth resource to each user

(column 3 lines 5-16); and

29.    dynamically changing the storage network bandwidth and LUN access priority

according to a load of the storage network of each user (column 3 lines 5-16).

30.     Regarding claim 5, Aziz-Erwin discloses the computer resource allocating

method according to claim 4, wherein when a load to the network and server with

respect to the resource divided to a user is increased, a change is made in the order of

the resource allocation of the storage network part, the VLAN part configuration and the

VPN part configuration (Aziz column 10 lines 25-37).

31.     Regarding claim 6, Aziz-Erwin discloses the computer resource allocating

method according to claim 4, wherein when a load to the network and server with

respect to the resource divided to a user is decreased, a change is made in the order of

the VPN part configuration, the VLAN part configuration, and the resource allocation of

the storage network part (Aziz column 11 lines 1-11).

32.     Regarding claims 8 and 9, Aziz-Erwin discloses the computer resource allocating

method according to claim 3, wherein a network load of each user is monitored in at

least one of positions of the user exit, the carrier and the entry of the servers, the

monitoring result is judged by a managing server in said computer system, and the

managing server in said computer system manages the carrier and computer system,

and issues a dynamic change instruction to a network bandwidth of each of the

positions (Aziz column 4 lines 32-41, column 5 lines 29-38, column 8 lines 48-65).

33.     Regarding claim 10, Aziz-Erwin discloses the computer resource allocating

method according to claim 3, wherein when making a network bandwidth additional

allocation change to a certain user in the case of increasing a network load of the

Internet with respect to the user, a change of the VPN part configuration is made in the

order of the entry of said computer system, the carrier and the user (Erwin section 10.3,

Aziz column 10 lines 25-37).

34.    Regarding claim 11, Aziz-Erwin discloses the computer resource allocating

method according to claim 3, wherein when making a network bandwidth reduction

change to a certain user in the case of increasing a network load of the Internet with

respect to the user, a change of the VPN part configuration is made in the order of the

user, the carrier and the entry of said computer system (Erwin section 10.3, Aziz column

11 lines 1-11).

35.    Regarding claim 12, Aziz-Erwin discloses the computer resource allocating

method according to claim 4, wherein when said storage network load is increased, a

change of the storage network configuration is made in the order of the LUN access

priority and the storage network bandwidth (Aziz column 8 lines 48-65, where Aziz

teaches dynamic allocation of disk resources as needed).

36.    Regarding claim 13, Aziz-Erwin does not specifically enumerate the computer

resource allocating method according to claim 4, wherein when said storage network

load is decreased, a change of the storage network configuration is made stepwise in

the order of the storage network bandwidth and the LUN access priority, however, in

light of the teaching of changing configuration of storage network to accommodate

increases in network load, it would have been obvious for Aziz-Erwin to change

configuration of storage to accommodate a decrease in network load, particularly in

view of the teachings of Aziz regarding reconfiguration of the VLAN for both increases

and decreases in network load.

### *Conclusion*

37.     The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

With regard to resource allocation:

US 6,597,956 to Aziz et al.

With regard to Virtual Private Networks:

US 6,662,221 to Gonda et al.

With regard to Virtual Private Networks and Storage Area Networks:

US 2002/0174211 to Ishizaki et al.

US 2003/0055933 to Ishizaki et al.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Fatima Ast whose telephone number is (571) 272-7217.

The examiner can normally be reached on M-F, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fatima Ast
Examiner
Art Unit 2143

FMA

BUNJOB JAROENCHONWANIT
PRIMARY EXAMINER